

**REGULATION 12  
MISCELLANEOUS STANDARDS OF PERFORMANCE  
RULE 13  
METAL MELTING AND PROCESSING OPERATIONS**

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**REGULATION 12**  
**MISCELLANEOUS STANDARDS OF PERFORMANCE**  
**RULE 13**  
**METAL MELTING AND PROCESSING OPERATIONS**

**12-13-100 GENERAL**

**12-13-101 Description:** The purpose of this Rule is to limit the quantity of particulate matter; volatile organic compounds, including odorous substances; and toxic compounds emitted from metal melting and processing facilities operating within the District.

**12-13-102 Applicability:** This Rule is applicable to any person who owns or operates within the District a metal melting or metal processing facility as defined in Section 12-13-222.

**12-13-103 Exemption, Clean Aluminum and Small Facilities:** The following facilities and operations are exempt from the Rule, with the exception of Section 12-13-503:

**103.1** Clean Aluminum Melting: Aluminum die casting and other facilities that melt only aluminum that contains less than 0.004 percent cadmium and 0.002 percent arsenic; and

**103.2** Metal melting and processing facilities that melt, heat treat, crush or shred one ton or less of metal and mixed material per rolling twelve month period.

**12-13-104 Exemptions, Metal Throughput and Risk:** Sections 12-13-301 through 303 of this Rule shall not apply to any metal melting and processing facility that meets all of the following conditions:

**104.1** Has an annual metal throughput that is less than 1,000 tons; and

**104.2** Has a facility cancer risk that is less than or equal to 10 per million as determined in accordance to the procedure prescribed in the District's Health Risk Screening Analysis Guidelines; and

**104.3** Has a facility chronic hazard index that is less than or equal to 1.0 as determined in accordance to the procedure prescribed in the District's Health Risk Screening Analysis Guidelines.

**12-13-105 Limited Exemption, Non-Odororous Materials and Processes:** Section 12-13-301.4 of this Rule shall not apply to any metal melting and processing facility for which the owner or operator can demonstrate that the facility does not employ any materials or processes that could emit odorous substances, as defined in this Rule, to atmosphere.

**12-13-200 DEFINITIONS**

**12-13-201 Abatement Device:** A device used to reduce emissions of air pollutants to the ambient air. Examples of abatement devices include baghouses, afterburners, and carbon adsorption units.

**12-13-202 Afterburner:** A combustion device used to incinerate uncombusted volatile organic compounds from the exhaust of metal melting furnaces.

**12-13-203 Alloy:** A solid or molten mixture of two or more metals, or of one or more metals and nonmetallic elements. Examples of alloys include steel, brass, and bronze.

**12-13-204 Baghouse:** An abatement device used to capture dust or particulate matter from a gas stream by passing the stream through a porous fabric, known as a bag or filter.

**12-13-205 Binder:** A material consisting of resin, activator, and/or catalyst used to bind sand

together in metal casting operations. Binders may include phenolic-based resins, urethanes, epoxy-acrylics, furfuryl alcohol, and sodium silicate.

- 12-13-206 Cancer Risk:** An estimate of the probability that an individual will develop cancer as a result of lifetime exposure to emitted carcinogens at a given receptor location, and considering, where appropriate, age sensitivity factors to account for inherent increased susceptibility to carcinogens during infancy and childhood.
- 12-13-207 Casting:** The formation of metallic parts or casts by pouring molten metal into a temporary mold and core assembly or a permanent mold for ingots, sows and cylinders.
- 12-13-208 Chronic Hazard Index:** The sum of the individual chronic hazard quotients for toxic air contaminants identified as affecting the same target organ or organ system.
- 12-13-209 Cooling:** The act of allowing cast metal to cool to close to ambient temperatures while being contained in the mold.
- 12-13-210 Cupola:** A vertical cylindrical shaft furnace to melt iron and steel by combustion of a charging material forced upward by heated air. Charge components may include coke, limestone and forms of iron and steel, such as scrap and foundry returns.
- 12-13-211 Die Casting:** The process of injecting molten metal under high pressure into a steel mold, known as a die, to form metal parts.
- 12-13-212 Dross:** The solid impurities floating on a molten metal composed primarily of impurities, metal, and metal oxides.
- 12-13-213 Emission Collection System:** Equipment that is installed for the purpose of directing, taking in, confining, and conveying emissions. [as per the Nonferrous Metal Melting ATCM].
- 12-13-214 Emission Point:** For the purposes of this Rule, an operation or opening from which air pollutants are exhausted to the atmosphere:
- 214.1 Type A Emission Point:** An emission point, having sufficiently regular geometry so that both flow volume and contaminant concentrations can be measured and where the nature and extent of air contaminants do not change substantially between a sampling point and the emission point. [Per District Regulation 1, Section 1-230];
- 214.2 Type B Emission Point:** An emission point other than a Type A emission point. [Per District Regulation 1, Section 1-231].
- 12-13-215 Fluff:** The material that remains after scrapped items, such as automobiles and appliances, are recycled for their metal content, and is a mixture containing scrap metals and non-metallic materials including, but not limited to, plastics, vinyl, sponge, foam, leather, textiles, rubber and glass.
- 12-13-216 Forge:** An oven to heat metals to a temperature at which the metal becomes malleable but is less than the melting point.
- 12-13-217 Foundry:** Any facility that melts iron or steel in the form of scrap, ingots, and/or other metal forms in a furnace and pours molten metal into molds to produce final or near final shape products.
- 12-13-218 Furnace:** For the purposes of this Rule only, a device used to remelt metal. Types of furnaces include, but are not limited to cupola, electric arc, sweat, and reverberator furnaces.
- 12-13-219 Health Risk Screening Analysis Guidelines:** The District's Health Risk Screening Analysis Guidelines that specify the procedures to be followed for estimating health risks including acute hazard index, chronic hazard index, and cancer risk. The Guidelines will generally conform to the Health Risk Assessment Guidelines adopted

by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA), pursuant to the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Health and Safety Code sections 44300 et seq.). The Health Risk Screening Analysis Guidelines and Table 2-5-1 will be periodically updated, typically within one year of any significant revision to OEHHA's Health Risk Assessment Guidelines, including any new or revised health effects value.

- 12-13-220 Metal:** For the purposes of this Rule, metals include ferrous (iron-based) metals and alloys and non-ferrous (non-iron-based) metals and alloys. Examples of metals include iron, steel, and other iron-based alloys; aluminum, copper, brass, bronze, gold, silver, zinc, tin, lead, platinum, nickel, chromium, cadmium, manganese, mercury, tungsten, and titanium and their alloys.
- 12-13-221 Metal Management:** The transport, receipt, collection, sorting, segregation, separation, compilation, crushing, shredding, and storage of metals, metal-containing materials and non-metallic materials.
- 12-13-222 Metal Melting and Processing Facility:** Any real property or structure that is used for melting metal or metallic alloys in a furnace; heat treating metals or metallic alloys at temperatures within 80 percent on an absolute temperature basis of the melting point of the metal or alloy; or receiving, sorting, segregating, recycling or reselling scrap metal. Metal melting and processing facilities include foundries, forges, and die casting facilities, and scrap metal recycling facilities.
- 12-13-223 Metal Melting and Processing Operations:** Any of the following operations at metal melting and processing facilities:
- 223.1 Foundry Operations:** The operation of a furnace in which scrap metal, ingots, and/or other forms of metal is charged, melted, and tapped; the casting of metal parts; the cooling and shake-out of the cast metal parts; mold and core making; grinding and finishing of the cast metal part; metal management and sand reclamation;
  - 223.2 Forging Operations:** The operation of an oven to heat treat metals, including annealing, tempering, quenching, and shaping; metal management, welding, grinding, and finishing;
  - 223.3 Metal Recycling Operations:** The receipt and storage of unprocessed metal and mixed materials; segregation and separation of metals from non-metallic material; metal crushing and shredding; finished processed metal storage; waste material treatment and storage; treatment, transfer, and delivery of processed recycled metals for further use, and process waste handling and disposal.
- 12-13-224 Metal Throughput:** The following definitions for metal throughput shall be used for the following operations:
- 224.1 Foundry Operations:** The weight of metal, in tons, charged to a furnace and melted;
  - 224.2 Forging Operations:** The weight of metal, in tons, heat treated in an oven during a forging operation;
  - 224.3 Metal Recycling Operations:** The weight of metal, in tons, received as scrap to be recycled in a metal recycling operation.
- 12-13-225 Mold and Core Making:** The formation of molds and/or cores from sand, binders and other substances such as clay, starch, charcoal; and acrylic, phenols, urethane to form mold assemblies to be used in the casting of metallic objects.
- 12-13-226 Odorous Substance:** For the purposes of this Rule only, any of the following substances: mercaptans calculated as methylmercaptan (CH<sub>3</sub>SH), phenolic compounds calculated as phenol (C<sub>6</sub>H<sub>5</sub>OH), trimethylamine (CH<sub>3</sub>)<sub>3</sub>N, and formaldehyde (CH<sub>2</sub>O).

- 12-13-227 Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate. [Per District Regulation 1, Section 1-233]
- 12-13-228 Particulate Matter (PM<sub>10</sub>):** Any material that is emitted as liquid or solid particles or gaseous material which becomes liquid or solid particles at the testing temperatures specified in the referenced test method, excluding uncombined water with an aerodynamic diameter smaller than or equal to a nominal 10 microns.
- 12-13-229 Responsible Manager:** An employee designated by the owner or operator of a facility to take actions required for compliance with this Rule on behalf of that facility.
- 12-13-230 Scrap Metal:** Leftover, unused, discarded, dismantled, demolished, or damaged metal products collected for reuse or recycling. Examples of scrap metal include, but are not limited to, engine blocks, wheels, automobile parts, frames, cans, electronics, consumer products, wiring, construction excess, tools, and furniture.
- 12-13-231 Shake Out:** The separation of a metal casting from a mold.
- 12-13-232 Slag:** A partially vitreous by-product of metal melting which contains impurities, including metallic oxides. Slag may be lighter than and rest above the molten metal fraction in a furnace and may be poured off before the molten metal can be tapped.
- 12-13-233 Tapping:** The pouring of molten metal from a furnace into ladles for transport to an area for casting.

#### **12-13-300 STANDARDS**

- 12-13-301 Emission Limits:** Within one year following the adoption of this Rule, emissions to the atmosphere shall be limited to:
- 301.1 Particulate Matter (PM<sub>10</sub>), Type A Emission Points:**
- 1.1 0.0020 grains per dry standard cubic feet (gr/dscf) (0.0046 g/m<sup>3</sup>) determined in accordance with Section 12-13-601 for a PM abatement device with a flowrate of at least 25,000 dscf/min or servicing a furnace;
  - 1.2 0.0040 gr/dscf (0.0092 g/m<sup>3</sup>) determined in accordance with Section 12-13-601 for a PM abatement device with a flow rate that is less than 25,000 dscf/min;
- 301.2 Opacity, Types A & B Emission Points:** Ten percent opacity for no more than three minutes segregated in any one-hour period, determined in accordance with Section 12-13-602, or half as dark in shade as that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines;
- 301.3 Organic Compounds, Type A Emission Points:**
- 3.1 Five (5) percent of the abatement device inlet concentration as measured at the outlet; or
  - 3.2 Five (5) parts per million on a volume basis (ppmv) measured at the exhaust outlet, provided the inlet concentration is 60 ppmv or less.

**301.4 Odorous Substances, Types A & B Emission Points:  
Maximum Allowable Emission Concentrations in Parts per Million  
(ppm)**

Compound or Family of Compounds	Type A Emission Point (ppm)	Type B Emission Point (ppm)
Dimethylsulfide (CH <sub>3</sub> ) <sub>2</sub> S	0.1	0.05
Mercaptans calculated as methylmercaptan CH <sub>3</sub> SH	0.2	0.1
Phenolic compounds calculated as phenol C <sub>6</sub> H <sub>5</sub> OH	5.0	2.5
Trimethylamine (CH <sub>3</sub> ) <sub>3</sub> N	0.02	0.02

**12-13-302 Operations Required to Be Collected and Abated:** Within one year following the adoption of this Rule, the owner or operator of a metal melting and processing facility shall not conduct any of the following operations unless emissions to the atmosphere that are regulated under this Rule from that operation are collected and vented to an air pollution abatement device to meet the emission limits set forth in Section 12-13-301. This section applies to operations in which:

**302.1** Molten metal is tapped, transported; poured or cast;

**302.2** Cast metal parts and mold assemblies are cooled or shaken out;

**302.3** Molds or cores are made;

**302.4** Solid slag or dross is processed or reprocessed, sorted, recycled, and prepared for transport and/or disposal or sale;

**302.5** Sand is reclaimed;

**302.6** Metal is welded or ground; and

**302.7** Crushing and shredding.

Any emissions collection system shall conform to specifications for design and operation given in Industrial Ventilation, Manual of Recommended Practices, 27th edition, 2010, published by the American Conference of Government and Industrial Hygienists, which is incorporated by reference herein; shall meet the requirements of Regulation 2, Rule 1; and have a collection efficiency of at least 85 percent as determined in accordance to the method set forth in Section 12-13-603.

**12-13-303 Compliance with District-Approved Comprehensive Compliance Plan:** Failure to implement and maintain any of the air pollutant control measures contained in the District-approved Comprehensive Compliance Plan is a violation of this Rule.

**12-13-400 ADMINISTRATIVE REQUIREMENTS**

**12-13-401 Comprehensive Compliance Plan Requirements:** The owner or operator of a metal melting and processing facility subject to any of the requirements set forth in Sections 12-13-301 through 302 shall develop an accurate and complete Comprehensive Compliance Plan (CCP) that details the facility air pollutant control measures to comply with the emission limits set forth in Sections 12-13-301 through 303. The CCP shall be comprised of three sections: the Operation, Maintenance and Monitoring (OM&M) Plan section, the Metal Management Plan (MMP) section, and the Odor Management Plan (OMP) section. The CCP shall be submitted to the District for approval in accordance with the schedule set forth in Section 12-13-402.

**401.1 Operation, Maintenance and Monitoring Plan Section Requirements:** The owner or operator of a metal melting and processing facility that is subject to any of the requirements of Sections 12-13-301 through 303 shall include an Operation, Maintenance and Monitoring (OM&M) Plan Section as part of the CCP that shall include the following components:

- 1.1 A detailed facility site plan rendered to scale and dimension that depicts within each building or structure that houses a metal melting or processing operation and the location of:
  - a. External and internal walls and internal partial wall or partitions;
  - b. Walls or partitions that control or affect air flow;
  - c. Windows located in external and internal walls;
  - d. External intake and exhaust vents, stacks, and other external emission points; and
  - e. The location of each metal melting and processing operation.
- 1.2 A pollutant flow diagram that includes each of the metal melting and processing operations, with the emission points and the downstream abatement systems:
- 1.3 A detailed description of the operating parameters and procedures and monitoring methods for each air pollution abatement device. The description shall include the manufacturers' specifications and parameters for proper operating conditions, including startup and shutdown; the facility's typical mode of each abatement device's operations; procedures for emergency shutdowns. For each of the following abatement devices, the description shall specifically include:
  - a. Bag House: Maximum pressure drop, maximum inlet temperature, and leak detection systems operating parameters;
  - b. Afterburner: Operating temperature, volumetric flow rate, residence time, and quench volume;
  - c. Carbon Adsorption Unit: Manufacturer's specifications for operating temperature, mass of activated carbon, volumetric flow rate, activated carbon recharge schedule (based on metal throughput or other appropriate parameter), and break through detection system operating parameters; and
  - d. Any other air pollution abatement device(s).
- 1.4 Air Pollutant Control Measures. The OM&M shall include the following OM&M measures:
  - a. Implementation of all abatement devices in accordance with manufacturer's specifications and District-approved operating parameters;
  - b. Dust-forming material, including dross, ash, or feed material, shall be stored in an enclosed storage area or stored in a manner that meets the requirements of Section 12-13-301.2;
  - c. Material collected by a particulate matter abatement device shall be discharged into closed containers or an enclosed system that is sealed to prevent any dust from getting out;
  - d. Surfaces that are subject to vehicular or foot traffic shall be vacuumed, wet mopped or otherwise maintained in accordance with a District-approved CCP. The OM&M Section of the CCP shall specify, at a minimum the following:
    - i. The areas to be cleaned, the method to be used, the required frequency of the cleaning activities, and
    - ii. A method of documenting the completion of the required activities.

**401.2 Metal Management Plan Section Requirements:** The owner or operator of any metal melting and processing facility subject to the requirements of Section 12-13-301 shall develop a Metal Management Plan (MMP) Section as part of the CCP that details metal management practices, and the measures, equipment and procedures, to implement the practices that are currently used or would be used to comply with the requirements set forth in Section 12-13-301:



- 2.1 Air Pollution Control Measures: the owner or operator of a metal melting and processing facility shall include the following measures to reduce or control the emission of particulate matter to atmosphere:
  - a. The use of water and/or other dust palliatives, berms, bins, tarps, screens, and enclosures for sorting, shredding, storage, and transport of scrap metals;
  - b. The collection of volatile petroleum-based liquids from scrapped vehicles, including gasoline and diesel fuel, to ensure at least 95 percent recovery of both vapor and liquid phases contained in fuel tanks and fuel lines, and other storage and transport media;
  - c. The collection of petroleum-based liquids from scrapped vehicles, including lubricating oils, power steering fluid, transmission fluid, and windshield wiper solution, to ensure the contents are not released during salvaging operations;
  - d. The removal and recovery of refrigerants in accordance to requirements set forth in Sections 12-7-302 and 304;
  - e. The removal of intact and sealed lead-acid batteries to prevent breakage or leakage prior to crushing;
  - f. The removal of mercury switches, whenever present, to ensure the contents are not released during salvaging operations;
  - g. The removal of PCB capacitors found on appliances, lamp ballast, and electronic motors;
  - h. The handling of fluff in a manner that would ensure its containment on site at the facility;
  - i. The removal of sodium azide ( $\text{NaN}_3$ ) canisters from unspent vehicle air bags;
  - j. The removal of lead wheel weights.
- 2.2 A process to ensure scrap metals received and used as charge for an onsite metal melting furnace be free to the extent possible of contaminants, including, but not limited to, oils, organic liquids, PCBs, mercury switches, lead contamination (engine blocks and tire weights), oil filters, plastics, rubber, leather, dirt, glass and other contaminants.

**401.3 Odor Management Plan Section Requirements:** The owner or operator of any metal melting and processing facility with an annual metal melting throughput of 1000 tons or more shall develop an Odor Management Plan (OMP) Section as part of the CCP that details the actions to be taken to ensure compliance with the emissions limits set forth in Section 12-13-301.4 and reduce or eliminate emissions of odorous substances offsite. The OMP shall at a minimum include the following:

- 3.1 A list of the facility's operations and emission points of odorous substances, including:
  - a. The types and amounts, and purpose of, or application for binders or any other material used for metal casting and the associated material safety data sheet (MSDS) or manufacturers' product information sheets that indicates the product formulations;
- 3.2 Air Pollution Control Measures: The Odor Management Plan shall include best management practices and measures to reduce, prevent and control emissions of odorous substances from each source of odorous substances to atmosphere to the maximum extent feasible.

**12-13-402 Compliance Schedule for the Comprehensive Compliance Plans:** The owner or operator of any metal melting and processing facility required to develop an CCP pursuant to the requirements set forth in Section 12-13-401 shall comply with the following schedules:

**402.1 Submission of Proposed CCP:** Submit each of the required plan sections that comprise the CCP for the affected facility to the District for approval no later than six months following adoption of this Rule or six months after

becoming subject to any of the requirements set forth in Section 12-13-401. The CCP shall be certified and signed by a Responsible Manager. Upon submission of the required plans, the APCO may require a consultation regarding the completeness and appropriateness of the plan to ensure that the requirements of Sections 12-13-301 through 303 are met.

**402.2 Modification of Permits / Authority to Construct:** Within 90 days following District approval of the required plan(s), an application for a permit modification to implement the District-approved plan(s) shall be submitted to the District for approval, if necessary.

**12-13-403 Review and Approval of Comprehensive Compliance Plans:** The procedure for determining whether each CCP meets the applicable requirements of this regulation is as follows:

**403.1 Completeness Determination:** Within 30 days of receipt of the CCP, the APCO will deem the plan complete if he determines that it includes the information required by Section 12-13-401. If the APCO determines that the proposed CCP is not complete, the APCO will notify the owner or operator in writing. The notification will specify the basis for this determination and the required corrective action.

**403.2 Corrective Action:** Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the proposed CCP within 30 days. If the APCO determines that the owner or operator failed to correct any deficiency identified in the notification, the APCO will disapprove the CCP.

**403.3 Public Comment:** The initial complete CCP (with exception of facility-designated confidential information) will be made available to the public for 30 days to consider any written comments received during this period prior to approving or disapproving the CCP.

**403.4 Final Action:** Within 30 days of the close of the public comment period, the APCO will approve the CCP if the APCO determines that the plan meets the requirements of Section 12-13-401, and shall provide written notification to the owner or operator. The APCO may extend this period by up to 60 days if necessary to complete the initial review comply with state law. If the APCO determines that the CCP does not meet the requirements of Section 12-13-401, the APCO will notify the owner or operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the CCP within 30 days. If the APCO determines that the owner or operator failed to correct any deficiency identified in the notification, the APCO will disapprove the CCP. If the owner or operator submitted a complete CCP in accordance with Section 12-13-402, and the APCO has not disapproved the CCP under this section, the CCP shall be considered an approved CCP.

**12-13-404 Review and Modification of Comprehensive Compliance Plans:** The owner or operator of any metal melting and processing facility subject to the requirements set forth in Section 12-13-401 shall review and revise the CCP to ensure compliance with the requirements set forth in Sections 12-13-301 through 303 and submit the revised plan to the District for approval in accordance with the requirements set forth in Sections 12-13-403.1, 403.2, and 403.4 within 90 days of any of the following events:

**404.1** Any affected equipment emits emissions pollutants in excess of the limits set forth in Section 12-13-301; or

**404.2** There is any operational, equipment, or throughput changes at the facility that triggers or requires a modification of the Permit to Operate of any affected equipment.

**12-13-405 Triennial Update of Comprehensive Compliance Plans:** The owner or operator of a metal melting and processing facility subject to the requirements set forth in

Section 12-13-401 shall update the APCO-approved CCP and submit the updated CCP to the APCO for review and approval within 90 days of the three-year anniversary date of approval of the original CCP and within 90 days of every third anniversary thereafter. Review and approval of the CCP will follow the schedule in Section 12-13-403. The updated CCP must be certified and signed by a Responsible Manager.

**12-13-406 Designation of Confidential Information:** When submitting the initial CCP or any modifications thereto, the owner or operator shall designate as confidential any information claimed to be exempt from public disclosure as trade secrets or by other provisions of law. If a document is submitted that contains information designated confidential in accordance with this Section, the owner or operator shall provide a justification for this designation and shall submit a separate copy of the document marked as “public copy,” with the information claimed to be confidential redacted.

#### **12-13-500 MONITORING AND RECORDS**

**12-13-501 Monitoring Requirements:** Within one year following the adoption of this Rule, the owner or operator of any metal melting and processing facility subject to the requirements of this Rule, in order to determine compliance with the requirements of Sections 12-13-301.1 through 301.3, shall operate:

- 501.1** Continuous parametric emissions monitoring system (CPEMS) to measure and record organic compound concentrations from exhaust stacks;
- 501.2** Continuous pressure monitoring system (CPMS) to measure and record pressure drops across dust collection bags;
- 501.3** Alarms to indicate when the control equipment is operating beyond the range of normal parameters listed in Sections 12-13-501.1 and 502.2;
- 501.4** An electronic bag break detection device with an alarm for bag house fabric filters;
- 501.5** A monitoring system that measures volumetric flow rates in exhaust stacks; temperatures; metal processing rates.

**12-13-502 Demonstration of Compliance with Odor Limits:** Within one year following the District approval of the Odor Management Plan of the CCP as required pursuant to Section 12-13-403 and at least once every five years thereafter, the owner or operator shall:

- 502.1** Develop a source test plan in accordance with the methodologies prescribed in Section 12-13-603 to determine compliance with the limits set forth in Section 12-13-301.4 and submit it to the APCO for approval;
- 502.2** Schedule the source test within 90 days of receipt of District approval and notify the APCO at least seven (7) days prior to the scheduled date of the source test;
- 502.3** Conduct a District-approved source test to determine the concentration(s) of odorous substances emitted during any of the following events:
  - 1.1 Mold making,
  - 1.2 Tapping;
  - 1.3 Casting,
  - 1.4 Cooling, or
  - 1.5 Shakeout; and
- 502.4** Submit the results of the District-approved source test to the District within seven (7) days of the receipt of the final source test report.

**12-13-503 Recordkeeping Requirements:** The owner or operator of any metal melting and processing facility subject to the requirements of this rule shall maintain all records that are necessary to determine compliance with the requirements of Sections 12-13-301 through 303 for a minimum of five years and make them available to the APCO or a designee of the APCO upon request including, but not limited to:

- 503.1 The monthly throughput of each type of metal processed, including metal melted, heated, scrapped, or recycled and the basis for each throughput determination.
- 503.2 A determination, and the basis of the determination, of the amounts of the following contaminants contained in the metallic materials listed in Section 12-13-503.1:
  - 2.1 Manganese,
  - 2.2 Cadmium,
  - 2.3 Chromium,
  - 2.4 Mercury,
  - 2.5 Lead,
  - 2.6 Nickel, and
  - 2.7 Arsenic;
- 503.3 The monthly throughput of each type of binder used;
- 503.4 The monthly throughput of sand used and replaced;
- 503.5 Documentation to demonstrate eligibility for exemption under Section 12-13-103.1. Documentation may include, but is not limited to:
  - 5.1 Certification from the supplier demonstrating the chemical composition of the aluminum;
  - 5.2 Demonstration of the chemical composition of the aluminum as determined in accordance to Sections 12-13-605 and 606;
  - 5.3 A method approved by the APCO.

## 12-13-600 MANUAL OF PROCEDURES

- 12-13-601 **Particulate Matter:** Compliance with the limits set forth in Section 12-13-301.1 shall be determined by one of the following test methods contained in the most recent revision of the Code of Federal Regulations, Title 40 Part 60, Promulgated Test Methods:
  - 601.1 United States Environmental Protection Agency, Method 201a – Determination of PM<sub>10</sub> and PM<sub>2.5</sub> Emissions from Stationary Sources (Constant Sampling Rate Procedure) in combination with Method 202 – Dry Impinger Method for Determining Condensable Particulate Emissions From Stationary Sources; or
  - 601.2 United States Environmental Protection Agency, Method 5 – Determination of Particulate Matter from Stationary Sources in combination with Method 202 – Dry Impinger Method for Determining Condensable Particulate Emissions from Stationary Sources.
- 12-13-602 **Determination of Visible Emissions:** Ringelmann standard shall be determined by Manual of Procedures-Volume 1 – Enforcement Procedures, Evaluation of Visible Emissions.
- 12-13-603 **Determination Capture Efficiency of an Emission Collection System:** The capture efficiency of an emission collection system required pursuant to Section 12-13-302 shall be determined in accordance with 40 CFR 51, Appendix M, Test Methods 204 – 204F, as applicable.
- 12-13-604 **Determination of the Emissions of Odorous Substances:** The determination of compliance with the limits set forth in Section 12-13-301.4 shall be determined in accordance with the following methods:
  - 604.1 **Methylmercaptan:** BAAQMD Manual of Procedures, Volume IV, Source Test Policy and Procedures, Source Test Method 11;
  - 604.2 **Phenolic Compounds:** BAAQMD Manual of Procedures, Volume IV, Source Test Policy and Procedures, Source Test Method ST-16;
  - 604.3 **Trimethylamine:** BAAQMD Manual of Procedures, Volume IV, Source Test Policy and Procedures, Source Test Method ST-22;
  - 604.4 **Formaldehyde:**

- 4.1 California Air Resources Board Method 430: Determination of Formaldehyde and Acetaldehyde in Emissions from Stationary Sources; or
- 4.2 United States Environmental Protection Agency Method 320: Measurement of Vapor Phase Organic and Inorganic emission by extractive fourier transform infrared (FTIR) spectroscopy.

**12-13-605 Methods for Determining the Cadmium Content of Aluminum:** To determine the cadmium content of aluminum alloys to evaluate eligibility for exemption under Section 12-13-103.1 one of the following shall be used:

**605.1 ASTM E 227-67 (1982),** "Standard Method for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Point-to-Plane Technique";

**605.2 ASTM E 607-90,** "Standard Test Method for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Point-to-Plane Technique, Nitrogen Atmosphere"; or

**605.3 ASTM E 1251-88,** "Standard Test Method for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Argon Atmosphere, Point-to-Plane, Unipolar Self-Initiating Capacitor Discharge."

**12-13-606 Methods for Determining the Arsenic Content of Aluminum:** To determine arsenic content in aluminum or zinc (or any other alloy in which determination of arsenic by spectrochemical methods is compromised by interference) to evaluate eligibility for exemption under section (c)(2), EPA Method 7061 (Revision 1, December 1987), "Arsenic (Atomic Absorption, Gaseous Hydride)", published in U.S. EPA Test. For aluminum alloys, sample digestion shall employ the hydroxide digestion technique given in appendix A to this control measure.